

LISTING OF THE CLAIMS

1. A method for producing purified steam, wherein a feed stream of water is fed through a falling film evaporator to produce a mixture of steam and liquid, liquid being collected below the lower end of the falling film evaporator to form a volume of liquid, and a flow essentially consisting of steam being conducted upward in a spiraling rotational path; droplets being separated from said upward flow, characterized by that the separated droplets form a reject stream, which is continuously removed from the process, and at least part of the collected volume of liquid is returned to the feed stream to form a circulating liquid.
2. A method according to claim 1, wherein a second reject stream is withdrawn from the circulating liquid.
3. A method according to claim 1 or 2, wherein the droplets are separated by means of a temperature controlled surface.
4. A method according to any claim 1 or 2, wherein dissolved gases are continuously removed from the circulating liquid.
5. A method according to any of claims 1 or 2, wherein the mass flow of the circulating liquid is at least twice the maximum product steam output.
6. A device for the production of purified steam, comprising a falling film evaporation tube unit and a unit for separating steam and liquid; the separating unit comprising:
 - a central downpipe for receiving the evaporation product,
 - an inner shell and an outer shell, the inner shell locally providing for passage of steam to the outer shell,
 - a set of fins forming a spiral path surrounding the downpipe,
 - a first exit tube connected to the bottom of the space between the inner and the outer shell,
 - a second exit tube connected to the space inside the inner shell, and

recirculation tubing connecting the second exit tube to an inlet of the falling film evaporation unit.

7. A device according to claim 6, comprising means to withdraw a reject stream from the recirculation tubing.

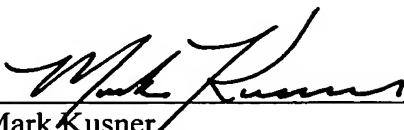
8. A device according to claim 6 or 7, comprising temperature control means fitted to the outer shell.

9. A device according to any claim 6 or 7, comprising means for withdrawing a stream from the inlet end of the falling film evaporator.

10. A device according to any claim 6 or 7, comprising a pump in the recirculation circuit having a mass flow capacity of at least twice the maximum product steam output of the device.

Respectfully submitted,

Date: January 26, 2005




Mark Kusner
Registration No. 31,115

KUSNER & JAFFE
Highland Place – Suite 310
6151 Wilson Mills Road
Highland Heights, Ohio 44143
(440) 684-1090 (phone)
(440) 684-1095 (fax)

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being deposited with the United States Postal Service on January 26, 2005 in an envelope addressed to Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 as "Express Mail Post Office to Addressee" Mailing Label No. **ED 234599337 US**.

Date: January 26, 2005



Christine Goellner